Healthcare Operations Management: Optimizing Patient Flow and Quality Care in India

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KEYWORDS

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ABSTRACT

Patients' preferences changed from general practice to sub-specialty practice because there was no referral system in place. Most people would rather speak with a medical expert. The cheap medical tariff may make it easier for patients to see a doctor. Patients can see a doctor for even less money thanks to medical insurance companies. In addition, the cost of a doctor's appointment remains the same regardless of how straightforward the case may be. It fosters competition between general practitioners and experts, with the belief that the latter are superior. In addition, confusion and repeated visits to the doctor are caused by a patient's lack of trust in medical professionals and their ignorance of medical procedures. Social Security recipients' hospitals are overworked. The quality of services decreases as the patient base grows. Equipment and facilities are ageing out of date. Providers are forced to restrict their flexibility and ability to adjust to the unique needs of their patients due to staffing shortages and scheduling constraints. Physicians may be forced to refer patients to paramedical departments instead of doing a complete examination in order to deliver a proper diagnosis due to the rising demand for medical services. The current study, which makes reference to India, focusses on healthcare quality management strategies in multispecialty hospitals.

1. Introduction

India had a sophisticated healthcare system and hospital even in antiquity. The state of healthcare was appalling in 1947, the year the nation acquired independence. 7400 hospitals, clinics, and dispensaries with 11,000 beds and a bed population ratio of 0.25 per 1000 persons were present in the country in 1947 [1]. There were 47,000 doctors, 7,000 nurses, 19 medical schools, and 19 medical institutions in the nation. A management philosophy known as quality management (QM) is characterised by its tenets, methods, and approaches that prioritise process orientation, competitive benchmarking, ongoing employee involvement and teamwork, committed leadership, and continuous development [14]. Identifying the overarching goal of health care is a prerequisite to developing pertinent standards for assessing quality [4]. The medical services of illness and injury prevention, diagnosis, and treatment are referred to as health care services [12]. It should be the explicit purpose of all health organisations, professional associations, and private and public purchasers to reduce the cost of illness, injury, and disability while simultaneously enhancing people's functioning and general health. [13]. The purpose of healthcare is to restore physical functioning to persons in a manner that is representative of their pre-impairment lifestyles, which highlights the special role that healthcare plays in the lives of people. Since an interdisciplinary team of specialists with complementary expertise is best suited to manage patients with complex disabilities and address the bio-psychosocial determinants of function, it is evident that a healthcare niche exists. Stroke survivors, fractures, pain management, brain injury, spinal injury, amputations, and cardiac disorders all need healthcare assistance [2]. Healthcare services are a valuable addition to other medical specialities like cardiology, neurology, paediatrics, and orthopaedics [3].

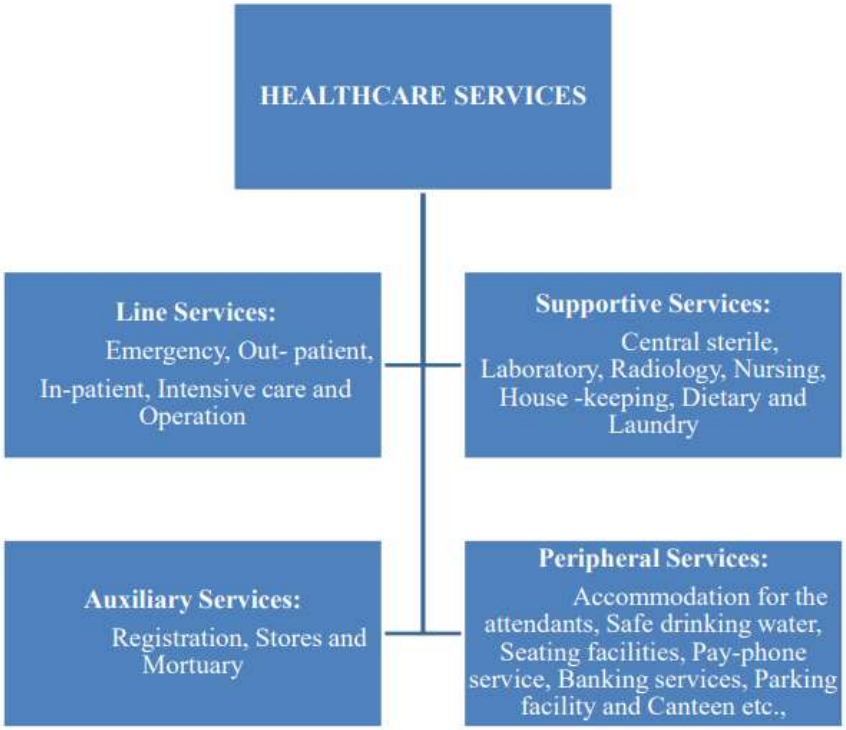

Figure 1. Healthcare Services of the Hospitals

Enhancing patients' quality of life is the main goal of healthcare. This has been noted in several investigations. After the initial period of a stroke patient's condition has passed, doctors typically recommend treatment to maximise the patient's recovery to function and help them acquire strategies to replace lost function. When stroke victims are referred to multidisciplinary inpatient programs, their outcomes are better than when they receive care on regular medical wards. Healthcare is considered necessary after lower limb amputation to enhance the amputee's quality of life. The goal of spinal cord injury patients' care is to enable them to lead fulfilling lives. For individuals with congestive heart failure, a typical cardiac healthcare program is believed to be beneficial in terms of increasing functional capacity, health-related quality of life, and lowering hospital readmission rates. [15].

2. Methodology

The population consisted of patients from multiple multispecialty hospitals in India. The respondents, who were over the age of 18, were citizens of India who had sought medical care at least once in a multispecialty hospital between 2023 and 2024. However, studying the entire universe has proven almost impossible in most research initiatives; sampling is the only choice. This is the same kind of inquiry that is underway now. Researchers should take into account important factors such as sample size and sample design [5]. A subset is selected from the population under investigation. A sample is a portion of a population that is studied in order to make generalisations about the population as a whole. The results are typically used to derive conclusions about the population because, if the sample is large enough, it will have the same characteristics as the population [6]. Because of this, an adequate sample is a reduced representation of the population, therefore sample design is crucial. Sampling is the statistical process of choosing a portion of an interest population (called a "sample") in order to observe and analyse the population statistically. There are numerous steps in the sample process. Finding the target audience is the first step. A population comprises all the individuals or objects that possess the qualities under study. A person, a group, an organisation, a country, an object, or anything else you wish to reach scientific conclusions about can serve as the unit of analysis [7].

The study's main focus was on hospital standards and staff satisfaction with regard to medical services and care. Furthermore, research methodologies were used to send surveys in the form of different questionnaires to different groups of the medical sector. Hospital services research findings were put

into practice when an agreement was reached and particular data on patients' contacts with doctors, nurses, and hospitals was gathered and evaluated [8].

Table 1. Participants profile

		Frequency	Percentage
Gender	Transgender	150	
	Male	152	
	Female	153	
	Total	455	100
Marital status	Single	129	
	Married	85	
	Divorced	160	
	Widowed	81	
	Total	**455**	100
Education	No Schooling	129	
	HSC	85	
	Under graduate	160	
	Post graduate	81	
	Total	**455**	100
Family Income	Less than Rs.25, 000	129	
	Rs.25, 000–Rs.50, 000	85	
	Rs.50, 000–Rs.1,00, 000	160	
	Greater than Rs.1,00,000	81	
	Total	**455**	100
Age	Below 45	129	
	45-50 years	85	
	50-60 years	160	
	Above 60	81	
	Total	**455**	100
Family member Occupation	Public Employee	129	
	Private Employee	85	
	Unemployed	160	
	Student	81	
	Total	**455**	100

3. Statistical Analysis

In research initiatives, statistical computations are carried out to illustrate the impacts and performance of various factors once the data has been organised and tabulated [9]. Table 2 below displays the calculated patient service quality dimensions and mean.

Table 2. Patient Service Quality

Descriptive		**Possession of Health Insurance or Policy**	
	Frequency		Frequency
New disease	60	YES	21
Post operative follow-up	37	YES	225
Previous disease	149	YES	-
Total	246	-	246

To explain how management strategy accounts for variations in patients' service quality, or the percentage change of the independent variable in the dependent variable, a summary model has been created specifically for this study. The F-test has been used to illustrate the model's usefulness. This study makes use of ANOVA to manage the several comparisons that have been conducted. By doing hypothesis tests on two factors at a time, this test addresses some of the issues that arise when assessing the parameters of numerous populations simultaneously. [10]

Table 3. ANOVA on total Hospital Service Quality

ANOVA					
Hospital Service Quality		Sum of Squares	df	Mean Square	F
Accessibility	Between Groups	.209	1	.209	5.158
	Within Groups	8.485	47	.181	
	Total	8.694	48		
Waiting time	Between Groups	.002	1	.002	6.011
	Within Groups	9.549	47	.203	
	Total	9.551	48		
Admission process	Between Groups	.002	1	.002	6.008
	Within Groups	9.998	47	.213	
	Total	10.000	48		
Physician‘s consultation	Between Groups	.000	1	.000	.
	Within Groups	.000	47	.000	
	Total	.000	48		
Service costs	Between Groups	.150	1	.150	7.145
	Within Groups	48.667	47	1.035	
	Total	48.816	48		
Appointment	Between Groups	.076	1	.076	12.491
	Within Groups	7.271	47	.155	
	Total	7.347	48		**36.81(7.36 Avg)**

The table's results indicate that there is a dependency between the respondents' gender and the component waiting time. However, the significant values of the other components exceed the permitted 5%. As a result, there is no correlation between the respondents' gender and the following factors: accessibility, admission procedure, physical environment, physician consultation, patient information provision, service charges, appointment, and service quality (total). [11]. The results indicate that multispecialty hospitals' quality management practices should primarily concentrate on implementing modern technology in their services, ensuring that medical reports are accurate and provide sufficient information about the patient's condition, delivering care promptly, having experienced staff members available on weekends, providing individualised medical attention, achieving accuracy in performance, and improving the interpersonal and communication skills of their doctors, nurses, and other stakeholders.

4. Conclusions

In line with global norms, multispecialty hospitals in India are expanding more quickly. The current study came to the conclusion that patient satisfaction has resulted from multispecialty hospitals' maintenance of standard quality management standards. All five of the service quality aspects are deemed significant by the hospital in terms of keeping clients happy and coming back. A biological system is considered healthy if it can obtain, transform, distribute, and use energy as efficiently as possible. A multispecialty hospital is one that is privately supported by patients, insurers, governments via national health insurance systems, foreign embassies, or both. It can be operated by a for-profit or non-profit organisation.

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